MARKETING MINICOMPUTERS FOR

ENGINEERING/SCIENTIFIC APPLICATIONS

IBM

DATA PROCESSING PRODUCT GROUP

Prepared by: INPUT

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I-IBM
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SCOPE OF PROJECT

- USING BEST EFFORTS, STUDY FIVE COMPANIES, I.E., DEC, DG, H-P, PRIME AND PERKIN-ELMER, TO DETERMINE WHY AND HOW THEY ARE SUCCESSFUL IN THE SMALL ENGINEERING AND SCIENTIFIC MARKET

STUDY METHODOLOGY

- DIRECT VENDOR CONTACT
- SECONDARY RESEARCH

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RESULT

- DELIVERED IN PRESENTATION FORM TO IBM IN HARRISON ON JULY 14, 1980

MARKET

- 1979 WORLD-WIDE SHIPMENTS ESTIMATED AT 138,000 UNITS WORTH APPROXIMATELY $3.9 BILLION, INCLUDES MAINFRAME, PERIPHERALS, SOFTWARE, SERVICE

  - MARKET SHARE ON FOLLOWING CHARTS SHOWS OEM IN UNITS FOR ENTIRE MARKET, END USER IN DOLLAR REVENUE FOR ENTIRE MARKET, INTERNATIONAL SALES AS A PERCENT OF TOTAL COMPANY REVENUE AND UNITS SHIPPED

- 1984 WORLD-WIDE SHIPMENTS ESTIMATED AT 270,000 to 382,000 UNITS WORTH APPROXIMATELY $16 BILLION

- PROJECT REVENUE TRENDS AND MARKET SEGMENTATION FOR 1979 TO 1984 SHOW 65% OEM/35% END USER WITH REVENUE DECLINING FROM 41% TO 38% FOR OEM AND REVENUE INCREASING FROM 59% TO 62% FOR END USERS

DIGITAL EQUIPMENT CORPORATION - THE MARKET LEADER

- MARKET SHARE - 49% OEM - 36% END USER
- INTERNATIONAL SALES - 38% REVENUE - 28% UNITS
- STRENGTHS
  - FIRST DEVICE IN 1960
  - DOMINANT MARKET SHARE
  - "DARLING OF THE UNIVERSITY SET"
  - DEFACTO STANDARD FOR MINIS
  - DIVERSIFICATION OF MARKETS
  - UPWARD COMPATABILITY
  - MANUFACTURING
  - DISCOUNT STRUCTURE
  - COMMUNICATIONS KNOWLEDGE
  - STRONG CUSTOMER BASE
  - REPUTATION

DEC - THE MARKET LEADER (CONT.)

- WEAKNESSES
  - ORDER LEAD TIME
  - INTERNAL CONFLICTS OF INTEREST DUE TO ORGANIZATION
  - SOFTWARE
  - SOME BEGINNINGS OF LARGE COMPANY ATTITUDE
- MARKET THRUST
  - END USER SALES
  - RETAIL STORE
  - COMMUNICATIONS -- NEW USERS

DEC - THE MARKET LEADER (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHOD
  - DIRECT SALES
    - . UNIVERSITIES AND INSTITUTIONAL LABS
    - . MEDICAL AND HOSPITALS
    - . EDUCATIONAL INSTITUTIONS
    - . GOVERNMENTS
    - . TELEPHONE AND UTILITY
  - OEM SALES
    - . ELECTRONIC TEST EQUIPMENT
    - . PROCESS CONTROL
    - . COMMUNICATION EQUIPMENT
    - . NAVIGATION AND GUIDANCE
    - . MEDICAL APPARATUS

DEC - THE MARKET LEADER (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHOD (CONT.)
  - SYSTEM INTEGRATORS
    - . SCIENTIFIC AND ENGINEERING
    - . COMMERCIAL BUSINESS
    - . INDUSTRY SPECIFIC PACKAGES
  - AUTHORIZED DISTRIBUTORS
    - . BETTER OEM CLIENTS
    - . USE OF LOGO
    - . COOPERATIVE ADVERTISING

DEC - THE MARKET LEADER (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHOD (CONT.)
  - RETAIL STORES
    - . 18 STORES AT 12/31/79
    - . SELL SMALL BUSINESS
    - . STANDARD SOFTWARE ONLY
    - . MODIFIED SOFTWARE REFERRED TO COMMERCIAL OEM OR DISTRIBUTOR
  - CATALOG SALES
    - . 25,000 ITEMS
    - . SPARE PARTS
    - . SUPPLIES
    - . SOME MODULES

HEWLETT PACKARD - ITS OWN WORLD

- MARKET SHARE - 7% OEM - 17% END USER
- INTERNATIONAL SALES - 47% REVENUE - 56% UNITS
- STRENGTHS
  - WELL KNOWN IN ENGINEERING CIRCLES DUE TO INSTRUMENT BACKGROUND
  - QUALITY PRODUCT
  - CORPORATE IMAGE
  - RELIABILITY
  - EASE OF PROGRAMMING
  - EASE OF USE
  - DBMS
  - STRONG INTERNATIONAL BASE
  - SIGNIFICANT VERTICAL INTEGRATION
  - GOOD SMALL BUSINESS MACHINE
  - LARGE TERMINAL BUSINESS
  - SERVICE AND MAINTENANCE
  - HEAVY VALUE ADDED
  - CUSTOMER TRAINING
  - STRONG OEM RELATIONSHIPS
  - GOOD SALES PERSONNEL

HEWLETT PACKARD - ITS OWN WORLD (CONT.)

- WEAKNESSES
  - VERY HIGH PRICE
  - LACK OF UNBUNDLING
    - FREE SOFTWARE
  - LONG DELIVERY
  - STRONG NIH
- MARKET THRUST
  - END USERS
  - RETAIL FOR PERSONAL COMPUTERS
  - TECHNICAL OEM's

HEWLETT PACKARD - ITS OWN WORLD (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHODS
  - DIRECT SALES
    - . MANUFACTURING
    - . SCIENTIFIC
    - . HEALTH CARE
    - . DDP
  - OEM's
    - . LABORATORY AUTOMATION
    - . TIMESHARING
    - . GENERAL SCIENTIFIC AND ENGINEERING

HEWLETT PACKARD - ITS OWN WORLD (CONT.)

- NEW APPLICATION AREAS
  - CAD
- ADVERTISING
  - LARGE AD BUDGET, GOOD RESULTS
  - USE DIRECT MAIL TO INTRODUCE NEW PRODUCTS
  - USE LOCAL DIRECT MAIL TO STIMULATE SALES
- SALES FORCE
  - ± 2,000 SALESMEN
  - TYPICALLY EE, COMPUTER SCIENCE WITH MBA
    - NEW HIRE MIX - 45% EXPERIENCED BUT NOT IN SALES; 27% SALES EXPERIENCE OTHER COMPUTER COMPANIES; 27% DIRECT FROM COLLEGE

HEWLETT PACKARD - ITS OWN WORLD (CONT.)

- SALES FORCE (CONT.)
  - COMPENSATION = $25K BASE PLUS COMMISSION TARGETED AT TWO TO THREE TIMES BASE
  - HIGH TURNOVER
  - TRAINING THREE TO TWELVE MONTHS
- MARKET APPROACH
  - NO DIFFERENCE IN MACHINE SIZE
  - ACCOUNT SIZE, OVER ONE BILLION HAVE A TECHNICAL AND COMMERCIAL, UNDER ONE BILLION HAVE EITHER

HEWLETT PACKARD - ITS OWN WORLD (CONT.)

- MACHINE OFFERED
  - MODIFIED WITH FEATURES
- ROOTS OF COMPANY SUCCESS
  - REPUTATION AMONGST ENGINEERS BASED ON INSTRUMENTATION AND OTHER PRODUCTS

DATA GENERAL - A DEC "ME TOO" PLUS MARKETING

- MARKET SHARE - 15% OEM - 7% END USER
- INTERNATIONAL SALES - 31% REVENUE - 30% UNITS
- STRENGTHS:
  - TOUGH COMPETITOR
  - UPWARD COMPATABILITY
  - BROAD PRODUCT LINE
  - GOOD FINANCIAL CONTROLS
  - EMPHASIS ON TECHNOLOGY
  - OEM DEDICATION

DATA GENERAL - A DEC "ME TOO" PLUS MARKETING (CONT.)

- WEAKNESSES:
  - LACK OF INNOVATION IN PRODUCTS
  - COMMUNICATION PRODUCTS
  - UNABLE TO RETAIN BRANCH MANAGERS
  - MANY LAWSUITS
- MARKET THRUST:
  - OEM
  - END USER VIA SOFTWARE APPLICATION PACKAGES

DATA GENERAL - A DEC "ME TOO" PLUS MARKETING (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHODS
  - DIRECT SALES
    - . OEM
    - . SYSTEMS INTEGRATORS
    - . GOVERNMENT
    - . SCIENTIFIC
    - . TIMESHARE
  - RETAIL/DEALERS
    - . MICRO LINE
    - . SMALL END LINE
  - INDUSTRIAL DISTRIBUTORS
    - . NO VALUE ADDED

DATA GENERAL - A DEC "ME TOO" PLUS MARKETING (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHODS (CONT.)
  - SYSTEMS INTEGRATORS
    - . BUY ENTIRE PRODUCT FROM DG
    - . COMMERCIAL OUTLET
    - . SOFTWARE VALUE ADDED
  - HARDWARE OEMS
    - . BUY PIECES FROM DG
    - . APPLICATIONS - PROCESS CONTROL, DATA COMMUNICATIONS, INSTRUMENTATION, SCIENTIFIC AND TIMESHARE

DATA GENERAL - A DEC "ME TOO" PLUS MARKETING (CONT.)

- NEW APPLICATION AREAS
  - COMPUTER-AIDED DEMOGRAPHICS
  - BRAIN/BODY SCANNERS
  - CAD
- ADVERTISING
  - BROAD BASE MAGAZINE (NOT TRADE JOURNALS)
  - DIRECT MAIL
  - ADS EFFECTIVE IF INCLUDES NEW OFFERING
- SALES FORCE
  - 673 SALES/ENGINEERS
  - COMBINATION BUSINESS AND TECHNICAL
  - NO SPECIFIC CHARACTERISTICS

DATA GENERAL - A DEC "ME TOO" PLUS MARKETING (CONT.)

- MARKET APPROACH
  - NO DIFFERENCE FOR LARGE MACHINES VERSUS SMALL
  - DIFFERENT MACHINES EMPHASIZED IN SPECIFIC MARKET SEGMENTS
- MACHINE OFFERED
  - MANY ENGINEERING/SCIENTIFIC USERS WANT COMMERCIAL AS WELL
  - "S" SERIES HAS SUBSET OF "C" SERIES FOR COMMERCIAL
  - MV8000 HAS FULL INSTRUCTION SET FOR "S" AND "C"
- ROOTS OF COMPANY SUCCESS
  - BETTER OEM THAN DEC

PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..."

- MARKET SHARE - 2% OEM > 1% END USER
- INTERNATIONAL 45% REVENUE - 20% UNITS
- STRENGTHS
  - INDUSTRY FIRST 32 BIT SUPERMINI
  - LARGE INSTALLED BASE
  - GOOD PRICE/PERFORMANCE
  - UPWARD COMPATABLE LINE
  - GOOD EQUIPMENT
  - HIGH RELIABILITY
  - STRONG SPECIFIC OEM FOLLOWING
  - GOOD MARKET NICHE PENETRATION

PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.)

- WEAKNESSES
  - PERKIN-ELMER
  - LACK OF CORPORATE SUPPORT
  - HIGH PERSONNEL TURNOVER
  - LAGGING PRODUCT INTRODUCTION
  - LITTLE USER SOFTWARE OR DBMS
  - WHAT TO SELL AFTER EVERYTHING IN THE WORLD HAS BEEN SIMULATED?
- MARKET THRUST
  - REAL TIME SIMULATION

PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHODS
  - DIRECT SALES
    - . OEM
    - . MILITARY
    - . AEROSPACE
    - . NASA
    - . SCIENTIFIC
    - . SIMULATION

PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.)

- NEW APPLICATIONS
  - IMAGE PROCESSING
  - COMPUTER-AIDED DEMOGRAPHICS
  - CAD/CAM
  - SIESMIC
- ADVERTISING
  - TRADE PUBLICATIONS ONLY
  - NO DIRECT MAIL
  - GOOD HIT RATIO ON ADS
- MARKET APPROACH
  - LARGE MACHINES ARE SOLD ON PERFORMANCE
  - SMALL MACHINES ARE SOLD ON PRICE/PERFORMANCE

PERKIN-ELMER - "INTERDATA SURVIVES IN SPITE OF..." (CONT.)

- MACHINE OFFERED
  - INSTRUCTION SET FEATURE DIFFERENCES
- ROOTS OF COMPANY SUCCESS
  - BEST PRODUCT AND REPUTATION IN REAL-TIME AND SIMULATION

PRIME -- "MARKETING CARRIES THE DAY"

- MARKET SHARE - >1% OEM - 4% END USER
- INTERNATIONAL SALES - 40% REVENUE - 45% UNITS
- STRENGTHS:
  - CONTINUING PRODUCT INTRODUCTION
  - AGGRESSIVE, DIRECT SALES FORCE
  - RAPID GROWTH
  - GOOD PROFITS
  - EXCELLENT BUSINESS ORIENTED MANAGEMENT
  - OVERSEAS DISTRIBUTION
  - 40% OF EMPLOYEES ARE IN SALES/MARKETING
  - IMPRESSIVE PENETRATION OF SCIENTIFIC/ ENGINEERING MARKET

PRIME -- "MARKETING CARRIES THE DAY" (CONT.)

- WEAKNESSES:
  - SMALL INSTALLED BASE
  - NO OEM PENETRATION
  - 50% INTERACTIVE PROCESSING THAT FALLS IN LINE WITH IBM 4300 AND DEC VAX

PRIME -- "MARKETING CARRIES THE DAY" (CONT.)

- MARKET THRUST
  - GENERAL PURPOSE
  - MARKETING ORIENTED DATA PROCESSING COMPANY
  - "SOFTWARE FIRST"
- MAIN MARKETS AND DISTRIBUTION METHODS
  - DIRECT SALES (ADVANCED AND LARGE USERS)
    - SCIENTIFIC/ENGINEERING
    - BUSINESS APPLICATIONS
    - DDP
    - DATA ACQUISITION
    - EDUCATION

PRIME -- "MARKETING CARRIES THE DAY" (CONT.)

- MAIN MARKETS AND DISTRIBUTION METHODS (CONT.)
  - OVERSEAS DISTRIBUTORS
  - JOINT MARKETING VENTURES
    - SOFTWARE COMPANIES
  - DEALER PROGRAM
    - 21 DEALERS AT 12/31/79
    - EQUIPMENT MAINTAINED BY PRIME FIELD ENGINEERS

PRIME -- "MARKETING CARRIES THE DAY" (CONT.)

- NEW APPLICATION AREAS
  - MASS TRANSIT
  - CAD
  - PC DESIGN (CAM)
- ADVERTISING
  - TRIED ALL APPROACHES WITH POOR RESULTS
- SALES FORCE
  - 250 SALESMEN
  - NO SPECIFIC DEGREES
- MARKET APPROACH
  - LARGE SYSTEMS SOLD ON PERFORMANCE
  - SMALLER SYSTEMS SOLD ON PRICE/PERFORMANCE

PRIME -- "MARKETING CARRIES THE DAY" (CONT.)

- MACHINE OFFERED
  - FEATURE CHANGES FOR SCIENTIFIC OR COMMERCIAL
- ROOTS OF COMPANY SUCCESS
  - SALES/MARKETING

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- STRENGTHS
  - SHEER SIZE
  - FINANCIAL RESOURCES
  - LOYAL MARKET PLACE
  - CORPORATE IMAGE
  - SYSTEM VERSATILITY
  - SERVICE/MAINTENANCE
  - S/2 THREAT
  - GOOD COME FROM BEHIND COMPANY

IBM (CONT.)

- WEAKNESSES:
  - LACK OF CORPORATE COMMITMENT TO SOLVE THE MINI PROBLEM
  - DON'T LIKE OEM
  - DON'T UNDERSTAND OEM
  - DON'T WANT OEM
  - LACK OF OEM-TYPE SOFTWARE (LIKE DEC/DG)
  - SMALL INSTALLED BASE
  - OEM PRICING DISCOUNTS
  - NOT STATE OF THE ART TECHNOLOGY
  - FRACTURED MARKET APPROACH
    - S/1
    - 8100
    - 4300
  - NO IMAGE IN SMALL SCIENTIFIC/ENGINEERING
  - SALESMAN CAN'T BREATHE OUTSIDE OF THE AIR CONDITIONED ROOM
  - DON'T LIKE INNOVATORS

RANKING FACTORS FOR ENGINEERING/SCIENTIFIC

	DEC	DG	H-P	PRIME	PERKIN-ELMER
PRICE/PERFORMANCE	5	5	5	3	5
OS/LANGUAGE	4	4	4	4	4
APPLICATIONS	2	1	1	0	1
SALES FORCE	3	5	4	5	2
SERVICE	4	2	4	1	3
REPUTATION	5	4	5	4	4

NOTE: 5 = HIGH, 1 = LOW

CUSTOMER ADOPTION PROCESS